Two (2) of the Core Node Tatung servers are responsible for supporting RADIUS, LDAP, and DNS. These services run on two (2) servers for redundancy. The third Tatung workstation runs the backup software that performs backups to the Benchmark DLT7 tape jukebox.

5   Core Node Component Naming Convention

The following table describes the naming convention for the Core Node components.

Core Node Component	DNS Name
Core Node Console Server	ccon1.<franchise city name>. ensoport.com
Core Node Router	crtr1.<franchise city name>. ensoport.com
Core Node Switch	csw1.<franchise city>.ensoport.com
Core Node Servers	cfep1.<franchise city>.ensoport.com cfep2.<franchise city>.ensoport.com cfep3.<franchise city>.ensoport.com
Backup Server	cbu1.<franchise city>.ensoport.com
NAS (Core VLAN)	cdisk1.<franchise city>.ensoport.com
NAS (Services VLAN)	sdisk1.<franchise city>.ensoport.com
Core Node UPS	cups1.<franchise city>.ensoport.com

10   Table 7. Core Node Component Naming Convention

The Core Node rack configuration is depicted in Figure 9.

Access Node Components

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The Access Node is comprised of the following components:

Black Box 40871 Terminal Server (Console Server)
Cisco AS5300 Remote Access Servers (2)
20   Cisco Catalyst 2924 XL 10/100 Autosensing Fast Ethernet Switch
Cisco CE-505 Cache Engine
APC Smart-UPS 3000 RM 3U T

Access Node component descriptions can be found in Appendix A.

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The ensoBox™ is configured with two (2) AS5300s per Access Node, and the following Access Node configurations are standard:

	ensoBox™ T1 Digital 1000 Access Node	ensoBox™ E1 Digital 1000 Access Node	ensoBox™ P1 Analog 1000 Access Node
Number of AS5300s per Node	2	2	2
Number and type of PRI/T1/E1 interface cards	1 – Quad T1/PRI Card	1 – Quad E1/PRI Card	N/A
Number of MICA CC Cards	1	1	N/A
Number of 12-port modem modules	8	10	N/A

Table 8. ensoBox™ 1000 Series AS5300 Configuration

	ensoBox™ T1 Digital 1500 Access Node	ensoBox™ E1 Digital 1500 Access Node	ensoBox™ P1 Analog 1500 Access Node
Number of AS5300s per Node	2	2	2
Number and type of PRI/T1/E1 interface cards	1 – Octal T1/PRI Card	1 – Octal E1/PRI Card	N/A
Number of MICA CC Cards	2	2	N/A
Number of 12-port modem modules	12	15	N/A

Table 9. ensoBox™ 1500 Series AS5300 Configuration

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	ensoBox™ T1 Digital 2000 Access Node	ensoBox™ E1 Digital 2000 Access Node	ensoBox™ P1 Analog 2000 Access Node
Number of AS5300s per Node	2	2	2
Number and type of PRI/T1/E1 interface cards	1 – Octal T1/PRI Card	1 – Octal E1/PRI Card	N/A
Number of MICA CC Cards	2	2	N/A
Number of 12-port modem modules	16	20	N/A

Table 10. ensoBox™ 2000 Series AS5300 Configuration

The Access Node P1 Analog 1000 can support 240 analog modems. The Access Node P1 Analog 1500 can support 360 analog modems. The Access Node P1 Analog 2000 can support 480 analog modems.

The AS5300 uses a RADIUS server (in the Core Node) to authenticate remote dial-up sessions. The RADIUS server, in turn, uses an LDAP server (also located in the Core Node) to grant authorization to ensoBox™ services including web portal, email, web hosting, chat, news, web browsing, etc.

The RADIUS server collects subscriber session accounting records The accounting record consists of the userid, call start, and call finish. From the accounting records, usage for every subscriber is counted each month, and a subsequent bill is produced based on the accounting records that are collected each month.

Cache Engine

The CE-505 supports transparent caching, content filtering, WCCP version 1 and WCCP version 2, HTTP 1.0 and 1.1. It is used to store the most requested objects locally on the ensoBox™, and is accessed by subscribers in a transparent caching mode. When a subscriber requests a URL, the Cisco 2621 router (Core Node) intercepts the request via WCCP version 2.0 and redirects all web requests to the CE-505. The CE-505 checks to see if it has the object(s) that compose the requested HTML. If the CE-505 has the objects stored on its hard drive it then checks the freshness of the objects. If the objects are not expired, it serves the objects back to the subscriber from the CE-505 instead of from the